

**MOLECULAR SIEVE CATALYST COMPOSITION,
ITS MAKING AND USE IN CONVERSION PROCESSES**

ABSTRACT

This invention provides methods of making molecular sieve catalyst particles, molecular sieve slurries that can be used in such methods, molecular sieve catalyst compositions and their use in catalytic hydrocarbon conversion processes. In one of its aspects, the invention provides a method of making molecular sieve catalyst particles, the method comprising the steps of: a) providing a solution or suspension of an aluminum-containing inorganic oxide precursor in a liquid medium; b) combining the solution or suspension of aluminum-containing inorganic oxide precursor with a molecular sieve, and optionally other formulating agents, to form a catalyst formulation slurry; c) aging the catalyst formulation slurry to generate in said slurry a percentage, or increase in said slurry the existing percentage, of aluminum atoms of the aluminum-containing precursor in the form of oligomers having a sharp ^{27}Al NMR peak at 62-63 ppm; and d) forming molecular sieve catalyst particles from the catalyst formulation slurry. The catalyst compositions obtained by the methods of the present invention have improved attrition resistance, and are particularly useful in hydrocarbon conversion processes.